



**Challenge TB - Namibia**  
**Year 2 Annual Report**  
**October 1, 2015 – September 30, 2016**

**November 5, 2016**

**Cover photo:**

*Participating in the End Term Program Review (Ovitoto Clinic in Okahandja district, August 2016) A team of MoHSS, KNCV Challenge TB, External (including Dr Lindiwe Mvusi, NTP manager for RSA) and local Reviewers in Otjozondjupa Region (Picture by Abbas Zezai, KNCV Namibia)*

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## **List of Abbreviations and Acronyms**

AIDS	Acquired immunodeficiency syndrome
APA	Annual Plan of Activities
ART	Anti-retroviral therapy
CBTBC	Community Based TB Care
CCM	Country Coordination Mechanism
CD	Country Director
CDC	Centers for Disease Control and Prevention
CTB	Challenge TB
DR-TB	Drug-resistant TB
DSD	Direct Service Delivery
GFATM	Global Fund against AIDS, TB and Malaria
DPS	Disease Prevalence Survey
HCW	Healthcare Workers
HIV	Human immunodeficiency virus
HSS	Health Systems Strengthening
IEC	Information, education, and communication
ICT	Information and communication technology
IPT	Isoniazid preventive therapy
KNCV	TB Foundation Royal Netherlands TB Foundation
LPA	Line Probe Assay
LTTA	Long Term Technical Assistance
M&E	Monitoring and evaluation
MoHSS	Ministry of Health and Social Services
MoU	Memorandum of Understanding
MoSS	Ministry of Safety and Security
MSH	Management Sciences for Health
MTP	Medium Term Plan
NACOP	National Aids Control Program
NEMLIST	National Essential Medicine List
NIP	Namibia Institute of Pathology
NGO	Non-governmental organization
NSC	National Steering Committee (for TB)
NTLP	National Tuberculosis and Leprosy Program
OGAC	Office of the Global AIDS Coordinator
OR	Operational Research
PEPFAR	President's Emergency Plan for AIDS Relief
PLHIV	Person living with HIV
PMDT	Programmatic Management of Drug Resistant TB
PMU	Programme Management Unit, CTB, The Hague
SI	Strategic Information
SSF	Single Stream Funding (GFATM)
SOPs	Standard Operating procedure
SOW	Scope of work

STTA	Short Term Technical Assistance
TA	Targeted Assistance
TB	Tuberculosis
TB CAP	TB Control Assistance Programme
TB-IC	TB Infection Control
TB COMBI	Communication for Behavioral Impact for Tuberculosis
USAID	United States Agency for International Development
VCT	Voluntary counseling and testing (for HIV)

## Executive Summary

Challenge TB Namibia is funded by President's Emergency Plan for AIDS Relief (PEPFAR) through the United States Agency for International Development (USAID) and implemented by KNCV TB Foundation (KNCV) as lead partner in close collaboration with the National TB and Leprosy Program (NTLP) and the National AIDS Control Program (NACOP). This is a four (4) year project which started from October 2015 up to September 2019. The total budget committed for this reporting year was USD 2,935,303.00

The main objectives of the project include Tuberculosis and HIV (TB/HIV); Early Access; Programmatic Management of Drug-resistant TB (PMDT); Tuberculosis Infection Control (TB-IC); Health System's Strengthening (HSS); Operational Research (OR) as well as Surveillance and Monitoring & Evaluation. The expected achievements over the life of the project are specified below:

- Proportion of health facilities/DOT service points with integrated or collaborative TB and HIV services (i.e. ART provided for co-infected TB patients at the same facility) at CTB supported health facilities/DOT service points increased from 8% (2/25) in 2014 to 80% (20/25) in 2019
- Proportion of HIV-positive registered TB patients given or continued on anti-retroviral therapy during TB treatment increased from 85% in 2014 to 100% in 2019 in CTB-supported districts.

During the period under review, the project collaborated closely with the Ministry of Health and Social Services (MoHSS), the Management Sciences for Health (MSH), Center for Disease Control and Prevention (CDC), the World Health Organization (WHO), Community Based Organizations (CBOs) as partners in the project as well as various other TB/HIV stakeholders. The project is operating in seven priority regions and eight urban hotspots hence effectively having a presence in 12 of the 14 regions of the country. This covers **25 out of 35 districts** nationally, which represent 80% of the persons in need of TB/HIV care and prevention.

Significant key outcomes/results were noted:

**Improved Access to Quality Assured patient-centered care for TB, TB/HIV and MDR-TB Services:** CTB has strengthened implementation of activities; especially in the CTB-supported regions/districts CTB staff have been actively involved in capacity building and improvement in quality of care. At least four CTB districts consistently maintained TB treatment success rates of above 90% throughout the year. The CTB technical team has been conducting training of MoHSS regional staff as well as newly engaged regional CTB staff on guidelines for the management of TB and TB/HIV and provided on-the-job training through mentorship and supportive supervision.

- **Decentralization of anti-retroviral therapy (ART) for stable patients to TB DOT containers** - CTB optimized the utilization of DOT containers, which were procured under TB CARE I project. In Engela district a total 2,721 stable PLHIV originally receiving their ART at Engela District Hospital are now receiving ART from six TB DOT points. This decentralization approach will be rolled out in other three CTB districts in APA3. The plan is to roll out the initiative in other CTB regions in APA3 we target three districts and beyond that, we will target the rest of CTB and nationally in APA4.
- **Joint training for Healthcare Workers (HCW) and Field Promoters** - CTB supported a total of 580 HCW (173 Males, 407 Females) with training on various technical areas. These trainings included a training of 30 Community Health Workers and 149 Field Promoters to strengthen TB/HIV Collaborative activities in four CTB districts (Engela, Katima Mulilo, Windhoek and Oshakati). Bringing these groups/cadres together for training empowered them to provide both services to the dually infected and this is a model that CTB is promoting in all of its sites.
- **TB/HIV integration at health facilities** - Two assessments of facility readiness to integrate TB/HIV services were conducted. Of the 54 facilities assessed 85.2% (46/54) provide integrated TB and HIV services, defined as TB patients being counseled and tested for HIV, started on ART and collecting both treatments at the TB clinic or isoniazid preventive therapy (IPT) and TB treatment being given at the ART clinic or having the same staff providing TB and HIV services regardless of physical location. The main outcome of these assessments was the development of facility-specific plans towards further integration of TB/HIV services. CTB has started utilizing

the results to map out DSD and TA sites in line with PEPFAR focus areas to strengthen and improve service delivery.

- **New Regimens for drug-resistant TB (DR-TB) treatment** - CTB Namibia provided technical support to the NTLP to access and utilize the USAID donation of Bedaquiline (BDQ) to those patients with MDR and XDR-TB who had limited options of treatment left. Ten patients (8 in Windhoek and 2 in Oshakati) were commenced on this treatment *one* patient was commenced on Delamanid (DLM) under the compassionate use program. In APA3, initial discussions will be held on the introduction of short treatment regimens for MDR-TB



***Prevention of transmission and disease progression:***

CTB supported the MoHSS in procurement of 5 DOT containers to be used in high burden areas of CTB regions (Oshikoto and Omusati). These containers have been refurbished to provide DOT for TB patients and HIV care (including pick-up points for ART for stable patients). In addition; CTB supported one district, Engela to screen HCW's for TB. A total of 747 HCWs were screened for TB out of which 20 were diagnosed with active TB. CTB also supported screening for TB in Police Holding cells and Correctional facilities during the same period (167 inmates: 157males and 10 females) and 51 officers (25 females). Under APA 3, this will be intensified.

***Strengthened TB platforms***

Namibia conducted an Epidemiological assessment prior to the end-term program review with support from WHO and KNCV (through STTA and logistical support). Results of the Epi-Assessment were used in planning and conducting the End Term Program Review as well as the development of the 3rd Medium Term Strategic Plan.

## 1. Introduction

KNCV Tuberculosis Foundation is working in Namibia since 2002. The organization initially provided technical assistance from its own funds. Over the years KNCV became successful in leveraging funding through USAID/Namibia to support the Government of the Republic of Namibia (GRN) to improve the quality of TB/HIV prevention (screening), diagnosis, care and treatment; prevention and treatment of drug resistant Tuberculosis; and support the scale up and wide use of new diagnostics and monitoring tools used in the control of the TB/HIV epidemic. KNCV in Namibia has successfully led the implementation of three USAID funding mechanisms since 2004: TBCTA, TBCAP, TBCARE I as well as the PEPFAR OGAC-funded 3Is Project.

Challenge TB (CTB) (USAID's latest funding mechanism which commenced in Namibia in October 2015) has been providing support to the National Tuberculosis and Leprosy Program (NTLP) and the National Aids Control Program (NACOP) with a particular emphasis on site level support through **Targeted Assistance (TA)** and **Direct Service Delivery (DSD)** to high burden TB/HIV sites. DSD implies that the project hires additional staff to complement the Ministry of Health and Social Services (MoHSS) staff in an endeavor to improve the quality of patient care and overall program performance. TA in this case means that the project provides close and quarterly supervision, mentoring and on-the-job-training, as well as data-driven planning and service provision. The priority technical areas, also in line with NTLP strategic objectives include Tuberculosis and HIV (TB/HIV); Universal and Early Access; Programmatic Management of Drug-resistant TB (PMDT); Health System's Strengthening (HSS); Tuberculosis Infection Control (TB-IC); OR as well as Surveillance and Monitoring & Evaluation.

CTB is operating in **seven priority regions** namely; Kavango, Khomas, Ohangwena, Omusati, Oshana, Oshikoto and Zambezi), **eight urban hotspots** which includes Gobabis, Grootfontein, Okahandja, Otjiwarongo, Keetmanshoop, Lüderitz, Swakopmund and Walvis Bay (See table on PEPFAR reporting sites below). In total, 25 out of 35 districts are covered under CTB (see figure 1), covering 80% of the persons in need of TB/HIV care and prevention. These geographical coverages protect previous investments (TB CARE I and the 3Is project) while strengthening patient-level support to the areas most affected by TB and HIV in the country. The project has closely collaborated with the MoHSS as the main partner, CDC, Global Fund (GF) and other USAID funded organizations (Project HOPE, Namibia, Red Cross and Penduka).

[illegible]

The project contributed towards the achievement of the 90-90-90 targets of PEPFAR, as well as those required for CTB, and those selected from the CTB M&E framework for the specific needs of this project. The success of the project was measured against an increased access to quality TB/HIV care and prevention, increased case-detection through active case-finding and increased prevention of TB as well as through effective TB-IC in targeted health facilities and affected families and communities.

## Objective 1. Improved Access

### Sub-objective 1. Enabling environment

CTB continued to support the NTLP with policy and guideline development, as well as capacity building through training and supportive supervision. In addition, the project maintained close collaboration and partnerships with three local HIV and community TB care organizations through sub-awardees. The project engaged all care providers, government, private sector and NGOs in supported areas to ensure a supportive environment for integrated TB/HIV care. CTB worked with MoHSS to sustain the gains in universal access to health care including free TB diagnosis and treatment, which are enshrined in the strategic plans. In APA3, CTB will work closely with the MoHSS to measure the catastrophic costs for TB care.

Challenges: Data on treatment success rates among prisoners is not readily available as all the data are lumped together by district (with no disaggregation). Under APA3 and beyond, CTB will engage with MoHSS and MoSS to ensure the use of the new TB registers captures information on origin of patients and documentation of appropriate outcomes.

## Key Results

**Table 1 Enabling environment**

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	Y2
1.1.1	% of notified TB cases, all forms, contributed by non-NTP providers (i.e. private/non-governmental facilities)	<b>Description:</b> Proportion of TB cases (all forms) reported by non-NTP providers (i.e. private/ non-governmental facilities) Indicator Value: Percent Level: National and CTB geographic areas <b>Numerator:</b> Number of all TB cases (bacteriologically confirmed + clinically diagnosed; includes new & relapse cases) reported by non-NTP providers in the past year <b>Denominator:</b> Total number of TB cases (bacteriologically confirmed + clinically diagnosed; includes new & relapse cases) reported by both NTP and non-NTP providers in the past year	9,882 (2014) (Denominator)	TBD	9,944 (2015) (Denominator)*  CTB: 8,028 (81%)
1.4.1	One or more components of the patient-centered approach are adopted into routine practice/policy	<b>Description:</b> One or more components of the patient-centered approach (i.e. universal access, consider patient needs, respect rights, provide quality care, establish trust, participate in process, and empower involvement) are adopted into routine practice/ policy Indicator Value: Yes/No Level: National	Yes	Yes	Yes

\*The project has been unable to get sector-specific data for Non-NTP providers during the reporting period under review.

## Sub-objective 2. Comprehensive, high quality diagnostics

CDC has been providing extensive support and Long Term Technical Assistance (LTTA) to the NTLP. Although not directly supporting laboratory, CTB collaborated through the NTLP and other partners in development of guidelines and testing algorithms. The project, aims to achieve universal molecular testing with GeneXpert for all presumptive TB cases. The existence of long term support from CDC in this area, ensured improved collaboration and coordination in working towards common goals of improved utilization of diagnostic services, GeneXpert, and second-line DST using LPA (Hain test® procured by September 2016). Namibia Institute of Pathology (NIP) aims to utilize the Hain Second-line testing by December 2016. Performance results in this area are indicated in the table below.

**Table 2 Comprehensive high quality diagnostics**

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	Y2
2.1.2	A current national TB laboratory operational plan exists and is used to prioritize, plan and implement interventions.	<p><b>Description:</b> This indicator measures whether or not a country has a defined TB laboratory operational plan (work plan) within the larger National TB Strategic Plan or National Laboratory Strategic Plan. The country and partners use the operational plan to design and implement priority activities to strengthen TB diagnostic services and the network for TB control.</p> <p>Indicator Value: Score based on the following:            0= Operational plan not available            1= Operational plan available            2= Operational plan available and follows standard technical and management principles of a quality work plan required for implementing the necessary interventions to build and strengthen the existing TB laboratory network (reference: "Practical Handbook for National TB Laboratory Strategic Plan Development"; <a href="http://www.stoptb.org/wg/gli/assets/documents/Lab_Strategic_Handbook.pdf">http://www.stoptb.org/wg/gli/assets/documents/Lab_Strategic_Handbook.pdf</a>)            3= Operational plan available and meets annual implementation targets</p>	1 (2014)	1	1

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	Y2
2.3.1	Percent of bacteriologically confirmed TB cases who are tested for drug resistance with a recorded result.	<p><b>Description:</b> This indicator measures the percentage of bacteriologically confirmed TB cases that are tested for drug resistance and also have results recorded in the TB register (disaggregated by new and previously treated cases). Drug resistance testing includes phenotypic (culture DST) and genotypic (molecular DST by GeneXpert, LPA or other molecular technologies).</p> <p>Indicator Value: Percent</p> <p>Level: National and CTB geographic areas</p> <p>Numerator: Number of bacteriologically confirmed TB cases that are tested for drug resistance and have results recorded in the TB register</p> <p>Denominator: Total number of bacteriologically confirmed TB cases notified during the reporting period</p>	44 %	80%	Currently data for 2015 and 2016 is not available. However the lab reporting systems and the electronic recording & reporting system are being revised to enable reporting on this data
2.2.6	Number and percent of TB reference laboratories (national and intermediate) within the country implementing a TB-specific quality improvement program i.e. Laboratory Quality Management System (LQMS).	<p><b>Description:</b> This indicator measures the percentage of TB reference laboratories in the country that are implementing a quality management system for continuous improvement of all aspects of laboratory operations to assure accuracy and reliability of testing, disaggregated by national and intermediate levels. Provide a score/rating for every reference laboratory implementing LQMS, either the "GLI Stepwise Process towards TB Laboratory Accreditation" (scoring = phase 1-4) or SLIPTA/SLMTA for TB (scoring=stars 1-5).</p> <p>Indicator value: Number and percent</p> <p>(Reference: Laboratory Quality Management Systems Handbook; <a href="http://www.who.int/ihr/publications/lqms/en/">http://www.who.int/ihr/publications/lqms/en/</a>)</p> <p>Numerator: Number of TB reference laboratories implementing a quality improvement program</p> <p>Denominator: Total number of TB reference laboratories in the country</p> <p>Level: National and/or Intermediate</p>	1 (2014)	100% (1/1)	100% (1/1)

### Sub-objective 3. Patient-centered care and treatment

Building on existing strengths, both STTA and LTTA were provided to the NTLP at national level, while targeted DSD and TA were delivered on TB and HIV in the selected geographic areas. Additionally, special attention was paid to the congregate settings, although the original plan was

to develop a Memorandum of Understanding (MOU) on active case finding through screening with the correctional services and fishing industry, this was not pursued further. The project had good access to the Ministry of Safety and Security (MoSS), which is mandated to provide services in correctional facilities (MoSS is a member of the National Steering committee). The table below highlights the results as per identified performance indicators.

**Table 3 Patient-centered care and treatment**

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	Y2
3.1.1	Number and percent of cases notified by setting (i.e. private sector, pharmacies, prisons, etc.) and/or population (i.e. gender, children, miners, urban slums, etc.) and/or case finding approach	<p><b>Description:</b> The number of TB cases all forms (i.e. bacteriologically confirmed plus clinically diagnosed, new and relapse) reported by the NTP disaggregated by setting (i.e. private sector, pharmacies, prisons, etc.) and/or population (i.e., gender, children, miners, urban slums, etc.) and/or case finding approach (ICF, ACF, CI). Private sector providers should be described according to context and case finding approach, for example, type of provider targeted (i.e. for profit medical clinics, pharmacists, informal providers, private hospitals, etc.).</p> <p>Indicator Value: Number and where available, percent</p> <p>Level: National and CTB geographic areas</p> <p>Numerator: Number of TB cases all forms (bacteriologically confirmed + clinically diagnosed; includes new and relapse cases) reported (by setting/ population/ case finding approach) nationally and in CTB geographic areas in the past year</p> <p>Denominator: Total number of TB cases (all forms) notified nationally and in CTB geographic areas</p>	9,882 (2014)	TBD	<p>8,028 / 81% (Oct 2015-Sept 2016) (CTB districts, however, disaggregation by settings is not yet available).</p> <p>9,944 National (2015)</p>
3.1.2	#/% of cases notified (new confirmed)	<p><b>Description:</b> Proportion of new confirmed TB cases reported by the NTP</p> <p>Indicator Value: Percent</p> <p>Level: National and CTB geographic areas</p> <p>Numerator: Number of new bacteriologically confirmed TB cases reported in the past year. A new case is a TB patient who never had treatment for TB or who has taken anti-TB drugs for less than one month. A bacteriologically confirmed TB case is one from whom a biological specimen is positive by smear microscopy, culture or WHO approved rapid test</p>	4,335 (2014)	TBD	<p>3,211 (81%) National: 3,978</p> <p>(Oct 2015-Sept 2016)</p>

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	Y2
		(such as Xpert MTB/RIF). Denominator: Total number of new TB cases (bacteriologically confirmed + clinically diagnosed)			
3.1.3	Case notification rate	<b>Description:</b> Case notification rate (per 100,000 population) all forms of TB (i.e. bacteriologically confirmed plus clinically diagnosed, new and relapse) Indicator Value: Number per year per 100,000 population Level: National Numerator: Number of new and relapse TB cases (bacteriologically confirmed plus clinically diagnosed) reported to the NTP during a year Denominator: Population size (available from the most recent census data)/100,000	442/100,000 (2014)	461/100,000	436/100,000 (2015)
3.1.4	Number of MDR-TB cases detected	<b>Description:</b> Total number of bacteriologically confirmed MDR-TB cases diagnosed. Project should follow the MDR-TB/Xpert algorithm in country regarding whether Rifampicin-resistant TB cases (RR-TB) should be counted as confirmed MDR-TB. If a country's algorithm states that a RR-TB cases is automatically assumed to be MDR-TB (i.e. no further DST required), then RR-TB should be included in the number of confirmed MDR-TB cases diagnosed. Otherwise, RR-TB should be excluded until proven via further DST that the case is a confirmed MDR-TB case. Indicator Value: Number Level: National and CTB geographic areas Numerator: Number of bacteriologically confirmed MDR-TB cases diagnosed during the reporting period	349 (2014)	TBD	347 (Oct 2015-Sept 2016; all RR cases)
3.2.1	Number and percent of TB cases successfully treated (all forms) by setting (i.e. private sector, pharmacies, prisons, etc.) and/or by population (i.e.	<b>Description:</b> The proportion of a cohort of TB cases (all forms, bacteriologically confirmed and clinically diagnosed, new and relapse) registered in a specified period that were successfully treated, whether with bacteriologic evidence of success ("cured") or without ("treatment completed") by setting (i.e. private sector, pharmacies, prisons, etc.) and/or by population (gender, children, miners, urban slums, etc.) and/or risk population groups defined by national policy (IDUs, diabetics, prisoners, etc.). There may be overlap between settings and groups. Disaggregation by risk population is required in contexts where CTB is providing	85% (2014)	90%	Disaggregated data by setting will be available by end of APA3)  CTB: 2,584/3,209 (81%)  National: 3,099/3,729 (83%)



#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	Y2
	gender, children, miners, urban slums, etc.).	treatment support for a specific group according to the annual work plan or in contexts where operations research allows for disaggregation and comparison across groups. Indicator Value: Percent Level: National and CTB geographic areas Numerator: Number of new and relapse TB cases (all forms) registered in a specified period that were cured or completed treatment Denominator: Total number of new and relapse TB cases (all forms) registered in the same period			(Oct 2015-Sept 2016)
3.2.2	Treatment success rate for pediatric TB patients	<b>Description:</b> The proportion of a cohort of new and relapse TB pediatric cases (bacteriologically confirmed and clinically diagnosed) registered in a specified period that successfully completed treatment, whether with bacteriologic evidence of success ("cured") or without ("treatment completed"). Indicator Value: Percent Level: National and CTB geographic areas Numerator: Number of new and relapse TB pediatric cases (all forms) registered in a specified period that were cured or completed treatment. Denominator: Total number of new and relapse TB pediatric cases (all forms) registered in the same period.	80.6% (2014)	N/A	85.1%
3.2.4	Number of MDR-TB cases initiating second-line treatment	<b>Description:</b> The number of bacteriologically confirmed, clinically diagnosed or unconfirmed MDR-TB cases started on second-line treatment during the reporting period. Unconfirmed MDR-TB cases are those awaiting C/DST results. RR-TB may fall under confirmed or unconfirmed depending on the country's MDR-TB diagnosis algorithm. Indicator Value: Number Level: National and CTB geographic areas Numerator: The number of confirmed or unconfirmed MDR-TB patients started on second-line treatment in the reporting period	327 (2014)	340	333  (Oct 2015 – Sep 2016)

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	Y2
3.2.10	#/% of planned cohort reviews conducted	<b>Description:</b> Proportion of planned cohort reviews conducted Indicator Value: Percent Level: National and CTB geographic areas Numerator: Number of planned cohort reviews conducted Denominator: Total number of planned cohort reviews	5 (100%)	5 (100%)	5 (100%)
3.2.11	% of HIV+ registered TB patients given or continued on CPT during TB treatment	<b>Description:</b> The purpose is to monitor commitment and capacity of programs to provide co-trimoxazole preventative therapy (CPT) to HIV-positive TB patients. It is important for programs to know the proportion of HIV-positive TB patients who receive this potentially life-saving therapy. Indicator Value: Percent Level: National and CTB geographic areas Numerator: Number of HIV-positive TB patients, registered over a given time period, who receive (given at least one dose) CPT during their TB treatment Denominator: Total number of HIV-positive TB patients registered over the same time period	98% (2014)	100%	99% (3,405 /3,450) National level data (Oct 2015-Sept 2016)  CTB: 3,046/3,087 (99%) (Oct 2015-Sept 2016)
3.2.12	% of HIV-positive registered TB patients given or continued on anti-retroviral therapy during TB treatment	<b>Description:</b> The purpose is to measure commitment and capacity of TB service to ensure that HIV-positive TB patients are able to access ART. This indicator measures people registered as HIV-positive who started TB treatment and who also started or continued on ART (i.e. recorded in ART register). Indicator Value: Percent Level: National and CTB geographic areas Numerator: All HIV-positive TB patients, registered over a given time period, who receive ART (are started on ART) Denominator: All HIV-positive TB patients registered over the same given time period.	84% (2014)	90%	90% (2,486/2,770 in CTB areas)  89% (3,054/3,450 National level data) (Oct 2015-Sept 2016)
3.2.13	% TB patients (new and re-treatment) with an HIV test result recorded in the TB register	<b>Description:</b> The purpose is to assess how many TB patients know their HIV status, regardless of whether testing was done before or during TB treatment. In settings where HIV is driving the TB epidemic, all TB patients should be offered and encouraged to have an HIV test. Indicator Value: Percent Level: National and CTB geographic areas	92% (2014)	95%	National: 8,817/9,944 (87%)  CTB: 7,857/8,028 (98%)

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target Y2	Result Y2
		Numerator: Number of TB patients registered over a given time period with an HIV test results recorded in the TB register. Denominator: Total number of TB patients registered over the same time period.			(Oct 2015-Sept 2016)
3.2.14	% of health facilities with integrated or collaborative TB and HIV services	<b>Description:</b> The proportion of health facilities with integrated or collaborative TB and HIV services (includes 3Is, 5 NTP activities - HIV testing, HIV prevention methods, CPT, HIV/AIDS care and support, ART) <b>Indicator Value:</b> Percent <b>Level:</b> National and CTB geographic areas <b>Numerator:</b> Number of health facilities with integrated or collaborative TB and HIV services <b>Denominator:</b> Total number of health facilities with TB and/or HIV services	54% (2015)	90%	CTB: 85.2% (46/54)
3.2.19	Treatment success rate of TB patients diagnosed in prison	<b>Description:</b> The proportion of a cohort of new and relapse TB cases (bacteriologically confirmed and clinically diagnosed) registered in a specified period in prison that successfully completed treatment, whether with bacteriologic evidence of success ("cured") or without ("treatment completed"). <b>Indicator Value:</b> Percent <b>Level:</b> National and CTB geographic areas <b>Numerator:</b> Number of new and relapse TB cases (all forms) registered in a specified period in prison that were cured or completed treatment. <b>Denominator:</b> Total number of new and relapse TB cases registered in the same period in prison	Not Available	85%	Not available. We intend to capture these data in APA3

## Objective 2. Prevention

### Sub-objective 4. Targeted screening for active TB

CTB supported operationalization of national guidelines on contact investigation, which includes recording of all contacts, TB disease screening, and treatment for latent TB infection and treatment for active TB disease. The project collaborated with Project Hope (Adherence and Retention project) and other community based TB and HIV care organizations. It is envisaged that by 2017, 80% of all index cases in

CTB areas should have documented contact investigation, and 100% of contacts under five should have documented evidence of having been screened.

**Table 4 Targeted screening for active TB**

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	Y2
4.1.1	#/% of eligible index cases of TB for which contact investigations were undertaken	<b>Description:</b> The proportion of eligible index cases of TB for which contact investigations were undertaken Indicator Value: Percent Level: National and CTB geographic areas Numerator: Number of index cases of TB for which contact investigations were undertaken during the period of assessment Denominator: Total number of index cases registered during the period of assessment	N/A	50%	CTB: 594/1,150 (52%)  NOTE: Gender Disaggregation not yet available. This will be addressed in APA3
4.1.2	#/% of children (under the age of five) who are contacts of bacteriologically-confirmed TB cases that are screened for TB	<b>Description:</b> The proportion of children (<5) who are contacts of bacteriologically-confirmed TB cases that are screened for TB (investigations for TB must be performed in accordance with existing national guidelines) Indicator Value: Percent Level: National and CTB geographic areas Numerator: Number of children (<5) who are contacts of bacteriologically-confirmed TB cases that are screened for TB Denominator: Total number of children (<5) who are contacts of bacteriologically-confirmed TB cases	N/A	50%	CTB: 72/181 (40%)
4.2.2	# of high risk persons screened for TB (stratified by applicable risk groups)	<b>Description:</b> Number of high risk persons screened for TB (investigations for TB must be performed in accordance with existing national guidelines) Indicator Value: Number Level: National and CTB geographic areas Numerator: Number of high risk persons screened for TB	N/A	TBD	<b>Health care workers:</b> 747 <b>Screening in police holding cells:</b> Inmates: 157M, 10F Police Officers: 26M, 25 F <b>Screening in prisons:</b> In-mates: 909 Officers: 410

### Sub-objective 5. Infection control

As part of collaborative TB/HIV activities, CTB supported health facilities in the CTB geographic areas to adhere to TB-IC standards and guidelines, in order to prevent transmission of TB in the high HIV burden facilities. During the period under review, CTB supported the TB surveillance among HCW. This strategy included the development of a systematic TB screening approach/model of HCW: strategy to be implemented in Y3 and scaled up country wide in Y4.

**Table 5 Infection control**

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	Y2
5.1.1	Status of TB-IC implementation in health facilities	<b>Description:</b> This indicator measures the status of TB-IC implementation in health facilities. Indicator value: Score based on below: 1=national TB-IC guidelines have been approved and disseminated in accordance with WHO policy; 2=TB-IC being implemented in pilot or limited health facilities; 3=TB-IC implemented nationally and/or national certification program implemented Level: National	2	2	2
5.1.4	% of TB service delivery sites in a specific setting (ex, prison-based, hospital-based, private facility) that meet minimum infection control standards	<b>Description:</b> This indicator measures the percent of TB service delivery sites in specific settings (disaggregated by public and private health facilities) that meet minimum IC standards in line with global guidance. Note this measurement requires survey of facilities selected through lot quality assurance sampling and by using the 10-item modified CDC monitoring tool. Indicator Value: Percent Level: National and CTB geographic areas Numerator: Number of TB service delivery sites that meet minimum IC standards in the area Denominator: Total number of TB service delivery sites in the area	N/A	60%	Not available
5.1.2	#/% of health facilities implementing TB-IC measures with	<b>Description:</b> Proportion of health facilities implementing TB-IC measures with CTB support (stratified by TB and PMDT services) Indicator Value: Percent	4 (2013)	N/A	CTB: 45/45(100%) facilities

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	Y2
	CTB support (stratified by TB and PMDT services)	Level: National and CTB geographic areas Numerator: Number of health facilities implementing TB-IC measures with CTB support in the area Denominator: Total number of health facilities in the area			
5.2.1	Status of TB disease monitoring among HCW	<b>Description:</b> This indicator measures the status of TB disease monitoring among HCWs in the country. Indicator value: Score based on below: 0=no policy/plan/ monitoring in place; 1=policy and scale-up plan for addressing TB among healthcare workers are enacted by the MoH; 2= monitoring program piloted or limited to certain areas; 3=annual reporting on TB among HCW is available as part of the national R&R system Level: National	0	1	1
5.2.3	Number and % of health care workers diagnosed with TB during reporting period	<b>Description:</b> This indicator measures the percent of HCW diagnosed with TB (all forms) annually (disaggregated by gender and age). This measurement may require a special study using a validated tool and/or methodology. Indicator Value: Percent Level: National and CTB geographic areas Numerator: Number of HCWs diagnosed with TB (all forms) during past year Denominator: Total number of HCW in the same year	51 (2014)	TBD	NTLP is considering introducing a systematic approach for TB screening of health workers. The program is in the process of piloting algorithms for TB screening among HCW. Screening of HCW done at one site in Engela during the reporting period. Of <b>747</b> screened, <b>20</b> (7%) were diagnosed with TB.

### Sub-objective 6. Management of latent TB infection

The Namibian national TB guidelines recommend empiric treatment for latent TB among all PLHIV and child contacts of TB cases. Information on these cases, although recorded, is not consistently reported; therefore data is not routinely available. In collaboration with MoHSS (HIV clinicians and clinical mentors) and community based organizations, CTB supported the use of IPT in all eligible PLHIV and contacts of TB patients through TA and site level engagement of all stakeholders.

**Table 6 Management of latent TB infection**

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	Y2
6.1.11	Number of children under the age of 5 years who initiate IPT	<b>Description:</b> The number of children under the age of 5 years who initiate IPT during the reporting period. <b>Indicator Value:</b> Number <b>Level:</b> National and CTB geographic areas <b>Numerator:</b> The number of children under the age of 5 years who initiate IPT during the reporting period.	N/A	TBD	CTB: 208

## Objective 3. Strengthened TB Platforms

### Sub-objective 7. Political commitment and leadership

Namibia's extension to the 2<sup>nd</sup> Medium Term Strategic Plan will come to an end in 2017. CTB provided logistical and STTA support to a national end-term TB program review in 2016. In addition the project provided support to the development of the 3<sup>rd</sup> medium term strategic plan, which should be in line with other government strategic documents and the WHO End TB Strategy.

**Table 7 Political commitment and leadership**

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	Y2
7.1.2	Status of NSP development: 0=The NSP is expired or not being implemented; 1=An updated/new	Description: This indicator measures the status of NSP development. Indicator value: Score based on below: 0=The NSP is expired or not being implemented; 1=An updated/new NSP is being drafted;	2 (2015)	3	2 (Medium Term Plan (MTP) III will be launched on 24 <sup>th</sup> March 2017)

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	Y2
	NSP is being drafted; 2=NSP has been developed and costed; 3=NSP has been finalized, endorsed by the government and implemented	2=NSP has been developed and costed; 3=NSP has been finalized, endorsed by the government and implemented Level: <b>National</b>			
7.2.3	% of activity budget covered by private sector cost share, by specific activity	<b>Description:</b> This indicator measures the proportion of CTB project activity budget covered by private sector cost share (if not monetary, will require estimation of costs) by specific activity. Indicator Value: Percent Level: Nationally for activities at national scale and in CTB geographic areas for activities focused in specific geographic areas where CTB is working. Numerator: Amount of private sector cost share covering CTB project activity during most recent fiscal year Denominator: Total CTB project activity budget plus private sector cost share amount during the year of assessment.	N/A	N/A	0%

#### Sub-objective 8. Comprehensive partnerships and informed community involvement

In this technical area, CTB focused on building strategic prominence and history of the Namibia office to support engagement of partners in national planning. CTB has been part of the national TB steering committee (NSC) and will continue to support its existence. To ensure an increased participation in CCM, the country director (CD) is a member of the CCM for the next years and will actively participate in CCM business hence influencing implementation of activities and mobilization of resources. CTB participated in GF reprogramming 2015 and Concept Note development (2016-17).



**Table 8 Comprehensive partnerships and informed community involvement**

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	Y2
8.1.3	Status of National Stop TB Partnership	<b>Description:</b> This indicator measures the status of National Stop TB Partnership by using special questionnaire for collecting relevant country level data <b>Indicator Value:</b> The score based on below: 0= no National Stop TB Partnership exists 1= National Stop TB Partnership established, and has adequate organizational structure; and a secretariat is in place that plays a facilitating role, and signed a common partnering agreement with all partners; but does not have detailed charter/plan, and does not meet regularly/ produce deliverables; 2= National Stop TB Partnership established, has adequate organizational structure and in a participatory way has developed detailed charter/plan, but does not meet regularly and does not produce deliverables; 3= National Stop TB Partnership established, has adequate organizational structure, has developed detailed charter/plan, meets regularly and critical deliverables are produced <b>Level:</b> National	1	2	2
8.2.1	GF grant rating	<b>Description:</b> This indicator presents GF TB grant performance rating results <b>Indicator value:</b> Score is based on the following: A1 Exceeds expectations A Good performance A2 Meets expectations B1 Adequate B2 Inadequate but potential demonstrated C Unacceptable <b>Level:</b> National	B1 (2015)	B1	B1
8.1.4	% of local partners' operating budget covered by	<b>Description:</b> This indicator measures the proportion of CTB project local partners' operating budgets covered by non-USG funding sources. A special questionnaire for collecting relevant country level data among CTB local partners is available. <b>Indicator Value:</b> Percent	N/A	N/A	N/A**

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	Y2
	diverse non-USG funding sources	Level: CTB geographic areas Numerator: Amount of CTB local partners' operating budgets covered by non-USG funding sources (TGF, WB, EU, ADB, DFID, private donations, investment income, other revenue, etc.) Denominator: Total operating budget of CTB local partners' operating budget (USG + non-USG sources) during the year of assessment.			

\*\* This data was not made available to CTB in Y2. In Y3, we will review the contract and see if this can be included.

### Sub-objective 9. Drug and commodity management systems

Although not directly involved in the procurement and supply chain system in Namibia, CTB collaborated with MSH and the MoHSS at regional and national level to ensure that this system functions well. The government is generally responsible for procurement and supply chain management, and SIAPS (MSH) provides technical support. CTB technical officers played a critical role in collaborating with relevant stakeholders to motivate for the introduction of the new MDR-TB drugs in particular BDQ and DLM in the National Essential Medicines List (Nemlist). With CTB support, the country sourced its first batch of BDQ under the USAID donation program and DLM under the Otsuka compassionate use program benefiting a total of 11 patients during the reporting period. In addition, CTB continued to promote and motivate the introduction of shorter regimen for MDR-TB.

**Table 9 Drug and commodity management systems**

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	Y2
9.1.1	# of stock outs per [year] of anti-TB drugs, by type (first and second line) and level (ex, national, provincial, district)	<b>Description:</b> This indicator should be used to report the number of stock-outs of any type of TB drug at any level of the health system that results in interruption of treatment. <b>Indicator Value:</b> Number <b>Level:</b> This indicator should be reported at whatever level a stock out that results in interruption of treatment occurs.	2 (2014)	0	N/A**

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	Y2
9.2.1	# of new and ancillary drug regimens that have become available in country since the start of CTB	<b>Description:</b> The number of new and ancillary drug regimens that have become available in the country through CTB support Indicator Value: Number Level: National Numerator: Number of new and ancillary drug regimens that have become available in the country through CTB support during past year	N/A	3	2 (BDQ and DLM, short treatment regimens will only be introduced upon approval by MoHSS maybe in APA3)

\*\* This is currently not supported by CTB. This data is based on MoHSS reports. Detailed stock-out levels by medicine type are not available  
CTB will endeavor to get this data from MoHSS in APA3

#### Sub-objective 10. Quality data, surveillance and M&E

In this technical area, CTB supported the development of integrated case-based electronic systems, which are interoperable with other MoHSS Health Information systems to improve data quality. In addition, CTB procured electronic devices (tablets) for NTLP enhance data capturing and communication. Furthermore, CTB collaborated with Project Hope to tap into their experiences with community level data collection using electronic tablets. The CTB Project also provided TA for the development of protocols for periodic surveys (DPS, EPI Assessment). CTB supported the training for and conducting of OR projects based on priorities identified by the country as well as mentoring support. In addition CTB supported the development of a new OR agenda and motivated for inclusion of OR priorities in the MTP III strategic plan.

**Table 10 Quality data, surveillance and M&E**

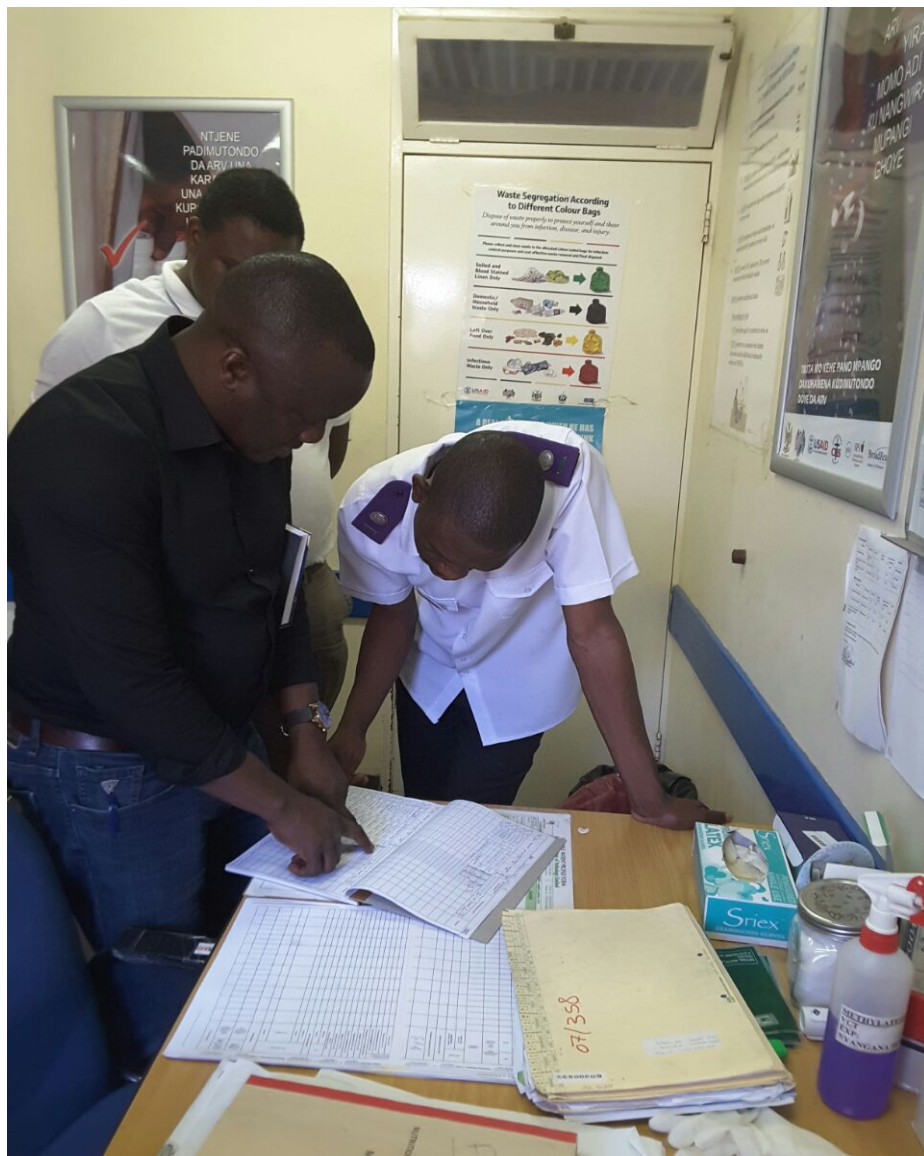
#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	Y2
10.1.1	#/% of PMDT sites reporting consistently via the ERR	<b>Description:</b> This indicator measures the number and percent of PMDT sites reporting consistently via the electronic recording and reporting system (ERR) Indicator Value: Percent Level: National and CTB geographic areas	4 (2014)	9	9

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	Y2
		Numerator: Number of PMDT sites reporting consistently via the ERR Denominator: Total number of PMDT sites			
10.1.2	#/% of eligible health facilities reporting TB data in real time or at least quarterly via the ERR	<b>Description:</b> This indicator measures the number and percent of health facilities reporting TB data in real time or at least quarterly via the ERR Indicator Value: Percent Level: National and CTB geographic areas Numerator: Number of health facilities reporting TB data in real time or at least quarterly via the ERR Denominator: Total number of health facilities with TB services	N/A	80%	***100% (25/25) All National & CTB health facilities reports MDR data via e-TB Manager which is real time. ET.Net is not real time yet ( Being upgraded)
10.2.2	Prevalence survey conducted / completed in the last three years	<b>Description:</b> TB prevalence survey has been conducted/completed within the last three years Indicator Value: Yes/No Level: National	No	No	DPS to be conducted in 2017
10.2.4	#/% of operations research, evaluation or epidemiological assessment study results disseminated (stratified by level of dissemination: report, presentation, publication)	<b>Description:</b> This indicator measures the number and percent of studies (operations research, evaluation or epidemiological assessment), results of which have been disseminated (stratified by level of dissemination: report, presentation, publication)	N/A	6 OR by September 2016	****10/12 OR (83%) disseminated; 8 at international conference, 2 at national level

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	Y2
10.2.6	% of operational research project funding provided to local partner (provide % for each OR project)	<b>Description:</b> This indicator measures the proportion of CTB-supported operations research project funding provided to local partner(s), by each OR project. Indicator Value: Percent Level: CTB geographic areas Numerator: Amount of operations research project funding provided to local partner by CTB during a year Denominator: Total CTB operations research budget during the year of assessment.	0%	N/A	N/A  No local partner was involved in OR studies
10.2.7	OR findings are used to change policy or practices (ex, change guidelines or implementation approach)	<b>Description:</b> For all CTB-supported operation research projects implemented in a country, results of these projects are used to change policy or practices (ex. change guidelines or implementation approach). Relevant data are collected/ presented for each individual project by special report with qualitative details. Indicator Value: Yes/No Level: National	Yes	Yes	Yes (e.g. use of the DRS result to inform approach in national diagnostic algorithm and to adopt STR)
10.2.1	Standards and benchmarks to certify surveillance systems and vital registration for direct measurement of TB burden have been implemented	<b>Description:</b> National TB surveillance system is certified based on WHO standards and benchmarks for TB surveillance and vital registration systems (for paper-based or electronic systems). For a country's TB surveillance systems to be certified as providing a direct measurement of TB cases and TB deaths, all 10 standards and their associated benchmarks (Part B, Section 1) should be met (source: Standards and Benchmarks for Tuberculosis Surveillance and Vital Registration Systems – Checklist and User Guide, WHO, 2014). The country standards and benchmarks score will be monitored as a sub-indicator to track progress. Indicator Value: Yes/No Level: National	No	No	No

\*\*\* The NTLP is in the process of developing of real time/web-based data reporting systems

\*\*\*\*8 Abstract accepted for the Union conference of 24-29th of October 2016. 1 Epidemiological assessment & 1 DRS disseminated nationally



CTB Team reviewing IPT register at Nyangana district Hospital (ART clinic), Kavango Region. Photo by; Hilya Ashipala, CTB M&E assistant.

### Sub-objective 11. Human resource development

In addition to recruitment of central and site level staff for TA and DSD, CTB provided mentorship, supportive supervision and training. Furthermore, CTB has continued to support trainings in priority areas in partnership with the NTLP and NACOP.

**Table 11 Human resource development**

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	Y2
11.1.2	% of planned supervisory visits conducted (stratified by NTP and CTB funded)	<b>Description:</b> The proportion of planned supervisory visits conducted (stratified by NTP and CTB funded) Indicator Value: Percent Level: National and CTB geographic areas Numerator: Number of planned supervisory visits conducted during reporting period Denominator: Total number of supervisory visits planned for <b>the same period</b>	50% (2014)	80%	100% (CTB=9/9; NTP=5/5)
11.1.3	Number of healthcare workers trained, by gender and technical area	<b>Description:</b> This indicator measures the number of healthcare workers (which includes health facility staff, community health volunteers, laboratory staff, sputum transport technicians, community-based DOTS workers) trained, by gender and sub-objective. Training includes any in-person, virtual, or on-the-job training that is longer than half a day and for which curriculum is available. This indicator is interchangeable with 'Number of individuals trained in any component of the WHO Stop/End TB Strategy with USG funding', which USAID missions may have as a requirement for internal agency reporting. Indicator Value: Number Level: National and CTB geographic areas Numerator: Number of HCWs trained during the reporting period	321 (2014)	315	550 F=387 M=163

### 3. CTB Support to GF Implementation

#### Current GF TB Grants

<b>Name of grant &amp; principal recipient</b> <i>(i.e., Tuberculosis NFM - MoH)</i>	<b>Average Rating*</b>	<b>Current Rating</b>	<b>Total Approved/Signed Amount**</b>	<b>Total Committed Amount</b>	<b>Total Disbursed to Date</b>
TB SSF phase 2	B1	B1	US 22,491,960	US\$ 11,743,204	11,743,204

\* Since January 2011

\*\* Current NFM grant not cumulative amount; this information can be found on GF website or ask in country if possible.

#### In-country GF status - key updates, current conditions, challenges and bottlenecks

The country team gave notice that the GF board has approved the TB grant as submitted, an official notice is awaited. Implementation of activities is so far on track. Namibia will apply for the next round in 2017. So far no specific discussions at country level have begun yet.

#### CTB involvement in GF support/implementation and any actions taken during Year 2

CTB Namibia provided technical assistance in the development and successful submission of a GF reprogramming request for TB SSF Phase 2 to cover the period up to end of 2017. In addition the project supported implementation through the recruitment and secondment to the NTLP of an administrative assistant whose role is to facilitate implementation of the grant through provision of secretarial services, administrative support and any other tasks as delegated by the program manager. Some of the tasks performed by the administrative assistant included facilitating financial requests for GF supported activities, organizing meeting venues for planning meetings, setting up appointments with sub-recipients and ensuring the calendar of activities is closely followed.

The CTB CD as a member of the CCM participates in CCM meetings and participates actively as a member of the Oversight committee. Although scheduled quarterly meetings are held, occasional ad hoc meetings are held depending on issues raised from time to time. The role as a CCM member is to participate in discussions and vote (if necessary) on issues where consensus is not reached, representing the TB constituency and identifying potential implementation challenges and providing remedial actions.



#### **4. CTB Success Story**

## **DOTS POINTS BECOME TREATMENT HUBS**

Engela district is one of the three districts of Ohangwena Region in the northern part of Namibia bordering Angola. TB is major problem in this district which reported 934 cases of all forms of TB in 2015 and a TB/HIV co-infection rate of 34%. In 2015, there were 14,180 co-infected patients who were receiving anti-retroviral therapy (ART) services at the hospital's ART clinic, but by September 2016 the number had dropped to 5152.

The drop was a direct result of a deliberate effort by the Ministry of Health and Social Services team with support from Challenge TB and other partners to decongest the central ART clinic and optimize the use of DOT containers throughout the district.

Prior to the intervention, all people with HIV received their ART at a central clinic. This not surprisingly caused long waiting times, congestion and over-work for the health care workers on duty. Challenge TB consulted with the district management teams to suggest utilizing already existing facilities within the district to decentralize the service. The proposed facilities were assessed to see if they were equipped and able to handle the workload.

With TB CARE I support, 28 prefabricated containers had been procured to provide TB-DOT in four districts, with the Engela district receiving ten. It was proposed to increase the services provided at these conveniently located points to include HIV care services such as medicine pick-up points and outreach services in general. In the CTB supported district of Engela a total 2,721 stable PLHIV who were originally receiving their ART at the district hospital are now receiving it at CTB supported TB-DOT points.

To strive to reach the UNAID 90-90-90 targets for HIV/AIDS and TB/HIV collaborative activities, Challenge TB intends to rollout this approach to more districts in the country. Specific attention will be paid to ensure that the TB/HIV co-infected patients begin ART less than 28 days after diagnosis at all Challenge TB sites. Challenge TB will strengthen the implementation of the TB/HIV treatment cascades to ensure the timely screening of PLHIV for TB at every visit, start new patients on TB treatment and initiate and maintain Isoniazid prophylaxis for the asymptomatic cases. In addition to reducing the pressure at the main ART sites, it is helping patients to adhere to their treatment.



*Bracing for expansion; Site Assessments and supportive supervision by CTB team: Katima Mulilo DOT Clinic- Zambezi Region*



*Ongenga Clinic, Engela District, one of the busiest clinics and DOT points where TB and HIV services are soon to be integrated*

## 5. Operations Research

**Table 12 OR Studies**

<b>Title of OR study</b>	<b>Local partners involved in study</b>	<b>Implementation Status</b>	<b>Key findings</b>	<b>Dissemination</b>
Assessment of readiness of Health facilities in Namibia for integration of TB/HIV services	MoHSS	Completed	<ul style="list-style-type: none"> <li>54 sites were assessed, 34 out of these were identified as high burden sites</li> <li>46/54 sites had integration (85%)</li> <li>Staff shortage, limited space, sub-optimal availability and usage of M&amp;E tools were identified as key limiting factors for integration.</li> </ul>	Yes
Second National Anti-Tuberculosis Drug-Resistance Survey	MoHSS, WHO, CDC, USAID, CBOs, GF, NIP	Completed	<ul style="list-style-type: none"> <li>MDR prevalence amongst new TB patients 3.9%</li> <li>MDR prevalence amongst previously treated TB patients 8.7%</li> </ul>	Yes
Epidemiological review of TB disease in Namibia	MoHSS, WHO, USAID, CBOs, NIP	Completed	<p>Of all the standards for TB surveillance, 4 were met, 6 were partially met and 3 were not met</p> <ul style="list-style-type: none"> <li>the greatest strengths of TB surveillance in Namibia include 100% reporting;</li> <li>supervisory visits that include a quantitative supervisory checklist;</li> <li>quarterly meetings between district and national level to review the epidemiology;</li> <li>routine analysis of TB data and systematic feedback of data quality and epidemiology;</li> <li>good data completeness and accuracy on key epidemiological indicators in ETR.Net;</li> <li>data are externally consistent with regards to the proportion of all cases that are 0-14 years old;</li> <li>high rates of HIV testing and treatment with CPT and ART</li> <li>Drug Resistance Survey (DRS) has been carried out to measure drug resistance</li> </ul>	Yes

<b>Title of OR study</b>	<b>Local partners involved in study</b>	<b>Implementation Status</b>	<b>Key findings</b>	<b>Dissemination</b>
Assessment of TB Disease Prevalence in Namibia	MoHSS, WHO, USAID, CBOs, NIP. CDC, GF	Protocol developed, Next steps includes recruitment of staff, procurement and field work	N/A	N/A
Use of community workers in the in-patient settings to improve TB treatment outcomes	MoHSS	Completed	Improved treatment outcomes where CHW are present	Yes
Health care workers screening at selected health facilities in Namibia	MoHSS	Completed	20/747 HCW screened had active TB 8/20 of these were nurses	Yes
Results of the first mass screening campaign for TB and the Namibian correctional service	MoHSS, NCS	Completed	1495 inmates, 1505 officers and 225 trainees screened 5 cases of TB diagnosed	Yes
Prevalence of NTM among presumptive TB cases in Namibia	MoHSS, NIP	Completed	248/3527 cultured specimens from presumptive TB cases had NTM Prevalence 6% amongst new and 11% amongst those previously treated for TB	Yes
Yield of contact investigation under programmatic conditions in rural Namibia	MoHSS	Completed	23/299 household contacts diagnosed with active TB at the 1 <sup>st</sup> screening	Yes
Role of mass screening in uncovering outbreaks of TB in correctional settings: second mass screening	MoHSS, NCS	Completed	909 inmates and 410 officers screened 6 cases diagnosed of which 5 were in the same correctional facility	Yes

<b>Title of OR study</b>	<b>Local partners involved in study</b>	<b>Implementation Status</b>	<b>Key findings</b>	<b>Dissemination</b>
Prevalence of cigarette's smoking among TB patients in Southern Namibia	MoHSS	Completed	115 cases of TB and 165 controls assessed 37% of cases and 29% of controls smoked cigarettes Association between smoking and TB highly significant amongst HIV negative patients (OR 9.0)	Yes
Assessment of facility readiness to provide integrate services for TB and HIV	MoHSS, USAID	Completed	37 facilities assessed of which 3 had full integration and 12 had partial integration of TB and HIV services	Yes

## 6. Key Challenges during Implementation and Actions to Overcome Them

**Table 13 Challenges & Actions**

Challenge	Actions to overcome challenges
<b>Technical</b>	
MoHSS endorsement of the DRS final report delayed	Engaged key stakeholders; such as the MoHSS, WHO and CDC
Timing and accessibility of data, given that MoHSS data to be shared with partner organizations needs approval	Assist the NTLP with the compiling of reports, and development of electronic systems, to shorten the compiling time and hence approval time.
The SOW of CTB Namibia does not include Pharmaceuticals and Laboratory and has limited influence in these areas yet these are mandatory reporting indicators. Priorities of the lab providers and responsiveness to requests often influenced by profit margins	Having the CTB staff participate in programmatic meetings with laboratory providers, pharmaceutical services and other fora and exerting influence through advocacy and negotiation. Engaged MoHSS and relevant stakeholders with varying degrees of success
While CTB stationed in some regions and facilities yet getting site-level data is still a huge problem (DSD and TA approach has not been eagerly accepted by the MoHSS)	Continuous engagement with the MoHSS, requesting the donor to lobby on Implementing partners' behalf
<b>Administrative</b>	
Recruitment of key positions, given the short contracts and uncertain funding	Continued to advocate for adequate funding
	Employed head hunting strategy

## 7. Lessons Learnt/ Next Steps

- a) The introduction of field staff such as Case Management Officers and District Coordinators: CTB introduced two categories of staff at regional and district level, the TB/HIV coordinator and case management officer at district hospital level (where TB/HIV burden is very high). This brought about significant changes in quality of care for patients and improved data quality. Better collaboration with the MoHSS staff also improved.
- b) Integration of training calendars with the MoHSS: organization of training of CTB staff as well as MoHSS staff at CTB sites was a problem initially as the training calendars often did not coincide. This affected both trainers and staff. Several meetings and discussions with the MoHSS have resulted in better coordination of these trainings through synchronized training calendars. Benefits of this change will be seen in APA3 and beyond
- c) Use of electronic data collection tools: CTB procured electronic tablets and laptops that were provided to key staff at districts and regional level. All field CTB staff also got these electronic gadgets which will be used for data collection and sharing with next levels. CTB supported

development of electronic systems that are interoperable with various data management software's that have been in use in the country. In APA3, site level data will be collected and shared with HQ, in real time.

- d) Excellent team cohesion, good working relationship with the NTP or other partners, implementation of a new or innovative approach: CTB team became bigger than before with expansion into the regions and districts. The mode of operation also changed with the new focus on high TB/HIV burden sites. Good relations with the MoHSS at national level were affected because of occasional miscommunication with various levels of health care delivery. With increased interactions with MoHSS at national level and regional level, sharing of calendars and activity plans, collaboration improved. CTB endeavors to strengthen ties with the MoHSS to facilitate smoother implementation of planned activities. Good working relations result in improved achievements of results.

## Annex I: Year 2 Results on Mandatory Indicators as well as National Data on the Number of pre-/XDR-TB Cases Started on Bedaquiline or Delamanid

Table 14 Mandatory Indicators & National Data

<b>MANDATORY Indicators</b>				
<i>Please provide data for the following mandatory indicators:</i>				
<b>2.1.2 A current national TB laboratory operational plan exists and is used to prioritize, plan and implement interventions.</b>	<b>National APA 2</b>	<b>CTB APA 2</b>	<b>CTB APA 2 investment</b>	<b>Additional Information/Comments</b>
<b>Score</b> as of September 30, 2016	1	N/A	<b>None</b>	A copy of the plan is not yet received from the Lab
<b>2.2.6 Number and percent of TB reference laboratories (national and intermediate) within the country implementing a TB-specific quality improvement program i.e. Laboratory Quality Management System</b>	<b>National APA 2</b>	<b>CTB APA 2</b>	<b>CTB APA 2 investment</b>	<b>Additional Information/Comments</b>
<b>Number and percent</b> as of September 30, 2016	1(100%)	N/A	<b>None</b>	SLIPTA/SLMTA score = 5
<b>2.2.7 Number of GLI-approved TB microscopy network standards met</b>	<b>National APA 2</b>	<b>CTB APA 2</b>	<b>CTB APA 2 investment</b>	<b>Additional Information/Comments</b>
<b>Number of standards met</b> as of September 30, 2016	2	N/A	<b>None</b>	10 and 6, are met, while 2,3,4,5,7, are partially met
<b>2.3.1 Percent of bacteriologically confirmed TB cases who are tested for drug resistance with a recorded result.</b>	<b>National 2015</b>	<b>CTB 2015</b>	<b>CTB APA 2 investment</b>	<b>Additional Information/Comments</b>



<b>Percent (new cases)</b> , include numerator/denominator	U	U	<b>Substantial</b>	Currently data for 2015 not available. However, the lab reporting systems and the electronic recording and reporting systems are being revised to enable reporting on this data
<b>Percent (previously treated cases)</b> , include numerator/denominator	U	U		
<b>Percent (total cases)</b> , include numerator/denominator	U	U		
<b>3.1.1. Number and percent of cases notified by setting (i.e. private sector, pharmacies, prisons, etc.) and/or population (i.e. gender, children, miners, urban slums, etc.) and/or case finding approach</b>	<b>National APA2</b>	<b>CTB APA2</b>	<b>CTB APA 2 investment</b>	<b>Additional Information/Comments</b>
<b>Number and percent</b>	<i>Fill in data in "Ind 3.1.1 - APA 2" worksheet</i>	<i>Fill in data in "Ind 3.1.1 - APA 2" worksheet</i>	<b>Substantial</b>	
<b>3.1.4. Number of RR-TB or MDR-TB cases notified</b>	<b>National APA 2</b>	<b>CTB APA 2</b>	<b>CTB APA 2 investment</b>	<b>Additional Information/Comments</b>
Total 2015	320	N/A	<b>Substantial</b>	CTB supports MDR -TB nationally
Jan-Mar 2016	79	N/A		
Apr-June 2016	79	N/A		
Jul-Sept 2016	U	N/A		
To date in 2016	158	N/A		
<b>3.2.1. Number and percent of TB cases successfully treated (all forms) by setting (i.e. private sector, pharmacies, prisons, etc.) and/or by population (i.e. gender, children, miners, urban slums, etc.).</b>	<b>National 2014 cohort</b>	<b>CTB 2014 cohort</b>	<b>CTB APA 2 investment</b>	<b>Additional Information/Comments</b>
<b>Number and percent</b> of TB cases successfully treated in a calendar year cohort	Getting from WHO	U	<b>None</b>	Challenge TB Namibia was not operational in 2014 then

<b>3.2.4. Number of patients started on MDR-TB treatment</b>	<b>National APA 2</b>	<b>CTB APA 2</b>	<b>CTB APA 2 investment</b>	<b>Additional Information/Comments</b>
Total 2015	308	N/A	<b>Substantial</b>	CTB supports MDR -TB nationally
Jan-Mar 2016	71	N/A		
Apr-June 2016	76	N/A		
Jul-Sept 2016	85	N/A		
To date in 2016	232	N/A		
<b>3.2.7. Number and percent of MDR-TB cases successfully treated</b>	<b>National 2013 cohort</b>	<b>CTB 2013 cohort</b>	<b>CTB APA 2 investment</b>	<b>Additional Information/Comments</b>
<b>Number and percent</b> of MDR-TB cases successfully treated in a calendar year cohort	Getting from WHO	N/A	<b>None</b>	CTB Namibia was not operational in 2013; also, CTB supports MDR -TB nationally
<b>5.2.3. Number and % of health care workers diagnosed with TB during reporting period</b>	<b>National 2015</b>	<b>CTB 2015</b>	<b>CTB APA 2 investment</b>	<b>Additional Information/Comments</b>
<b>Number and percent</b> reported annually	52	3 out of 140 (2%)	<b>Substantial</b>	NTP is considering introducing a systematic approach for TB screening of health workers. The programme is in the process of piloting the algorithms for TB screening among health workers. The screening of HCW was done on one site in Engela during the reporting period. Of 140 screened, 3 (2%) were diagnosed with TB
<b>6.1.11. Number of children under the age of 5 years who initiate IPT</b>	<b>National 2015</b>	<b>CTB 2015</b>	<b>CTB APA 2 investment</b>	<b>Additional Information/Comments</b>
<b>Number</b> reported annually	86	N/A	<b>Moderate</b>	A cumulative total of 86 children under 5 years were initiated on IPT during the reporting period

<b>7.2.3. % of activity budget covered by private sector cost share, by specific activity</b>	<b>National APA 2</b>	<b>CTB APA 2</b>	<b>CTB APA 2 investment</b>	<b>Additional Information/Comments</b>
<b>Percent</b> as of September 30, 2016 (include numerator/denominator)	N/A	N/A	<b>None</b>	CTB Namibia does not have a cost share budget
<b>8.1.3. Status of National Stop TB Partnerships</b>	<b>National APA 2</b>	<b>CTB APA 2</b>	<b>CTB APA 2 investment</b>	<b>Additional Information/Comments</b>
<b>Score</b> as of September 30, 2016	1	N/A	<b>Substantial</b>	
<b>8.1.4. % of local partners' operating budget covered by diverse non-USG funding sources</b>	<b>National APA 2</b>	<b>CTB APA 2</b>	<b>CTB APA 2 investment</b>	<b>Additional Information/Comments</b>
<b>Percent</b> as of September 30, 2016 (include numerator/denominator)	N/A	Namibia Red Cross Society - 94.7%	<b>None</b>	
<b>8.2.1. Global Fund grant rating</b>	<b>National APA 2</b>	<b>CTB APA 2</b>	<b>CTB APA 2 investment</b>	<b>Additional Information/Comments</b>
<b>Score</b> as of September 30, 2016	B1	N/A	<b>Substantial</b>	
<b>9.1.1. Number of stock outs of anti-TB drugs, by type (first and second line) and level (ex, national, provincial, district)</b>	<b>National APA 2</b>	<b>CTB APA 2</b>	<b>CTB APA 2 investment</b>	<b>Additional Information/Comments</b>
<b>Number</b> as of September 30, 2016	U	U	<b>None</b>	Data not available.
<b>10.1.4. Status of electronic recording and reporting system</b>	<b>National APA 2</b>	<b>CTB APA 2</b>	<b>CTB APA 2 investment</b>	<b>Additional Information/Comments</b>
<b>Score</b> as of September 30, 2016	2	N/A	<b>Substantial</b>	The design and development of the new TB registry system has started in APA2.

<b>10.2.1. Standards and benchmarks to certify surveillance systems and vital registration for direct measurement of TB burden have been implemented</b>	<b>National APA 2</b>	<b>CTB APA 2</b>	<b>CTB APA 2 investment</b>	<b>Additional Information/Comments</b>
<b>Yes or No</b> as of September 30, 2016	Yes	N/A	<b>Limited</b>	The report provided
<b>10.2.6. % of operations research project funding provided to local partner (provide % for each OR project)</b>	<b>National APA 2</b>	<b>CTB APA 2</b>	<b>CTB APA 2 investment</b>	<b>Additional Information/Comments</b>
<b>Percent</b> as of September 30, 2016 (include numerator/denominator)	N/A	N/A	<b>None</b>	No OR planned with local partners in APA2. CTB supported other work such as the Epi Assessment/Facility Assessments
<b>10.2.7. Operational research findings are used to change policy or practices (ex, change guidelines or implementation approach)</b>	<b>National APA 2</b>	<b>CTB APA 2</b>	<b>CTB APA 2 investment</b>	<b>Additional Information/Comments</b>
<b>Yes or No</b> as of September 30, 2016	N/A	N/A	<b>Substantial</b>	
<b>11.1.3. Number of health care workers trained, by gender and technical area</b>	<b>CTB APA 2</b>		<b>CTB APA 2 investment</b>	<b>Additional Information/Comments</b>
			<b>Substantial</b>	
	<b># trained males APA 2</b>	<b># trained females APA 2</b>	<b>Total # trained in APA 2</b>	<b>Total # planned trainees in APA 2</b>
1. Enabling environment	<b>33</b>	<b>146</b>	<b>179</b>	<b>235</b>
2. Comprehensive, high quality diagnostics	<b>10</b>	<b>20</b>	<b>30</b>	<b>45</b>
3. Patient-centered care and treatment	<b>14</b>	<b>10</b>	<b>24</b>	<b>-</b>
4. Targeted screening for active TB	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>
5. Infection control	<b>35</b>	<b>100</b>	<b>135</b>	<b>150</b>
6. Management of latent TB infection	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
7. Political commitment and leadership	<b>67</b>	<b>110</b>	<b>177</b>	<b>-</b>

8. Comprehensive partnerships and informed community involvement	0	0	0	0
9. Drug and commodity management systems	0	0	0	0
10. Quality data, surveillance and M&E	12	20	32	
11. Human resource development	2	1	3	3
Other (explain)	0	0	0	0
Other (explain)	0	0	0	0
<b>Grand Total</b>	<b>173</b>	<b>407</b>	<b>580</b>	<b>463</b>
<b>11.1.5. % of USAID TB funding directed to local partners</b>	<b>National APA 2</b>	<b>CTB APA 2</b>	<b>CTB APA 2 investment</b>	<b>Additional Information/Comments</b>
<b>Percent</b> as of September 30, 2016 (include numerator/denominator)	N/A	25.00%	<b>Substantial</b>	The amount of 225,392 USD is all the local partners received from CTB in APA2 (Namibia Red Cross, Penduka)

<b>Year/Quarter</b>	<b>Number of pre-/XDR-TB cases started on BDQ nationwide</b>	<b>Number of pre-/XDR-TB cases started on DLM nationwide</b>	<b>CTB APA 2 investment</b>	<b>Additional Information/Comments</b>
Total 2014	0	0	<b>Substantial</b>	
Total 2015	0	0		
Jan-Mar 2016	0	0		
Apr-Jun 2016	7	1		
Jul-Aug 2016	3	0		
To date in 2016	10	1		

		Reporting period					CTB APA 2 investment	Additional Information/Comments
		Oct-Dec 2015	Jan-Mar 2016	Apr-Jun 2016	Jul-Sept 2016	Cumulative Year 2		
Overall CTB geographic areas	TB cases (all forms) notified per CTB geographic area ( <i>List each CTB area below - i.e. Province name</i> )						Substantial	<p>These (25) are all CTB districts, in 11 out of 13 regions CTB is working in APA2.</p> <p>Data for Q4 was not available at time of completion of this template and this would be available after the ongoing data review meetings (end of October 2016). Omuthiya district data is reported under Onandjokwe in this reporting period</p>
	Windhoek	406	385	343	361	1495		
	Oshikuku	73	62	48	46	229		
	Outapi	65	55	44	69	233		
	Okahao	25	15	16	22	78		
	Tsandi	17	18	9	13	57		
	Oshakati	133	137	144	128	542		
	Onandjokwe	141	112	93	129	475		
	Omuthiya	0	0	0	0	0		
	Tsumeb	70	52	52	58	232		
	Engela	220	180	184	209	793		
	Eenhana	48	53	58	48	207		
	Okongo	25	20	12	12	69		
	Katima Mulilo	131	100	105	101	437		
	Rundu	138	116	102	102	458		
	Nankundu	29	33	30	44	136		
	Nyangana	14	23	20	23	80		
	Andara	28	28	35	33	124		
	Grootfontein	66	48	55	49	218		
	Otjiwarongo	33	23	36	37	129		
	Okahandja	38	49	39	37	163		
	Keetmanshoop	104	80	67	81	332		
	Luderitz	21	29	41	33	124		
	Walvis Bay	126	125	130	127	508		

	Swakopmund	88	88	95	76	347		
	Gobabis	134	138	134	156	562		
	TB cases (all forms) notified for all CTB areas	2,173	1,969	1,892	1,994	8,028		
	All TB cases (all forms) notified nationwide (denominator)	2,500	2,250	2,183	2,328	9,261		
	% of national cases notified in CTB geographic areas	87%	88%	87%	86%	87%		
	TB cases (all forms) notified from this intervention					0		
	All TB cases notified in this CTB area (denominator)					0		
	% of cases notified from this intervention	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		

Intervention (setting/population/approach)						CTB APA 2 investment	
Choose an item.	CTB geographic focus for this intervention					0	
	TB cases (all forms) notified from this intervention					0	
	All TB cases notified in this CTB area (denominator)					0	
	% of cases notified from this intervention						
Choose an item.	CTB geographic focus for this intervention					0	
	TB cases (all forms) notified from this intervention					0	
	All TB cases notified in this CTB area (denominator)					0	
	% of cases notified from this intervention						
Choose an item.	CTB geographic focus for this intervention					0	
	TB cases (all forms) notified from this intervention					0	
	All TB cases notified in this CTB area (denominator)					0	





## Annex II: Status of EMMP activities

**Table 15 EMMP activities**

Year 2 Mitigation Measures	Status of Mitigation Measures	Outstanding issues to address in Year 3	Additional Remarks
<p>1. CTB will ensure proper procurement of these items, which will be delivered directly to Ministry of Safety and Security (MoSS) storage facility. Although the responsibility for proper storage and distribution to the intermediate/peripheral levels lies with the MoSS, CTB will advise the MoSS on the proper storage based on the information provided on the manufacturer's Materials Safety Data Sheet, also in line with WHO's <i>Safe Management of Waste from Health-care Activities</i> (<a href="http://www.who.int/water_sanitation_health/medicalwaste/wastemanag/en/">http://www.who.int/water_sanitation_health/medicalwaste/wastemanag/en/</a>).</p> <p>Additionally, CTB will advise the MoSS to follow all national laws and regulations. (Namibian National Waste Management Policy (2011), Environmental Management Act, 7 of 2007 and Waste Management Regulations: Local authorities act, 1992, Namibia)</p> <p>The MoSS will collaborate with adjacent district hospitals to ensure that all medical waste generated by use of the GeneXpert system will be disposed of by the laboratory, which also makes use of the aforesaid guidelines, and comply with the Public and Environmental Health Act of 2015.</p> <p>Digital X-ray equipment is being deliberately selected due to its minimal ability to generate waste. The equipment will be housed in compliance with the Radiation Protection And Waste Disposal Regulations: Atomic Energy And Radiation Protection Act, 2005 (Act No. 5 Of 2005) in consultation with the Radiation Protection Sub-division in the Ministry of Health and Social Services. X-ray films will not be used, in favor of digital imaging. If need be, any lead products to be disposed of will be shipped back to the supplier for recycling.</p> <p>CTB will advise the Government (i.e. MoSS/NTP) to follow the guidelines provided in the <i>Guidelines for Small-Scale Activities in Africa</i> for proper packaging and disposal of all public health commodities other than pharmaceutical drugs.</p>	Implemented	None	We are expecting small changes in the next year, especially considering that procurements will not be done in APA3.
<p>2. For health facilities being supported by CTB, the project will obtain the country's non-medical and medical waste management regulations and procedures. CTB will ensure that all supported facilities adhere to the correct local waste disposal regulations, which comply with the <i>Environmental Guidelines for Small-Scale Activities in Africa</i>, Namibian National Waste Management Policy (2011),</p>	Implemented	None	CTB Technical team will directly monitor this in CTB sites and provide appropriate guidance

Year 2 Mitigation Measures	Status of Mitigation Measures	Outstanding issues to address in Year 3	Additional Remarks
<p>Environmental Management Act, 7 of 2007 and Waste Management Regulations: Local authorities act, 1992, Namibia.</p> <p>During supportive supervision visits, management and disposal of medical waste will be discussed and checked; when necessary corrections will be made.</p> <p>The Healthcare Waste Management Minimum Program Checklist and Action Plan will be completed by all health facilities being supported by CTB. CTB affiliated staff will be trained on how to use this tool to assess the status of and improve waste management practices</p>			